

1 / 6 4

SEQUENCE LISTING

<110> CHUGAI SEIYAKU KABUSHIKI KAISHA

<120> BISPECIFIC ANTIBODY SUBSTITUTING FOR FUNCTIONAL PROTEINS

<130> C1-A0313P2

<140> PCT/JP2003/013123

<141> 2003-10-14

<160> 82

<170> PatentIn version 3.1

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Gln Val Gln Leu Lys Gln Ser Gly Ala Glu Leu Val Arg Pro Gly Ala

1

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10

15

Ser Val Arg Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Phe Tyr

20

25

30

2 / 6 4

Trp Ile Asn Trp Ile Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile

35

40

45

Gly Arg Ile Asp Pro Tyr Asp Ser Glu Thr Arg Tyr Asn Gln Lys Phe

50

55

60

Lys Asp Lys Ala Ile Leu Thr Val Asp Lys Tyr Ser Ser Thr Ala Tyr

65

70

75

80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys

85

90

95

Ala Lys Gly Val Tyr Asp Gly His Trp Phe Phe Asp Val Trp Gly Ala

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105

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Gly Thr Ser Val Thr Val Ser Ser

115

120

<210> 2

<211> 108

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<213> Homo sapiens

<400> 2

Asp Ile Val Met Thr Gln Ser His Lys Phe Met Ser Thr Ser Val Gly

3 / 6 4

1

5

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15

Asp Arg Val Ser Ile Thr Cys Lys Ala Ser Gln Asp Val Ser Thr Ala

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25

30

Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile

35

40

45

Tyr Ser Ala Ser Tyr Arg Tyr Thr Gly Val Pro Ala Arg Phe Ser Gly

50

55

60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Val Gln Thr

65

70

75

80

Glu Asp Leu Ala Val Tyr Tyr Cys Gln Gln His Tyr Arg Thr Pro Pro

85

90

95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Leu Lys Arg

100

105

<210> 3

<211> 119

<212> PRT

<213> Homo sapiens

<400> 3

4 / 6 4

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Glu Lys Pro Gly Ala

1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe Ser Asp Tyr

20 25 30

Asn Met Asn Trp Val Lys Gln Ser Asn Gly Lys Ser Leu Glu Trp Ile

35 40 45

Gly Asn Ile Asp Pro Tyr Asn Gly Asp Thr Asn Tyr Asn Gln Lys Phe

50 55 60

Lys Gly Lys Ala Thr Leu Thr Leu Asp Lys Ser Ser Ser Thr Ala Tyr

65 70 75 80

Met Gln Leu Lys Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys

85 90 95

Ala Arg Ser Arg Gly Trp Leu Leu Pro Phe Ala Tyr Trp Gly Gln Gly

100 105 110

Thr Leu Val Thr Val Ser Ala

115

<210> 4

<211> 108

5 / 6 4

<212> PRT

<213> Homo sapiens

<400> 4

Asp Ile Leu Met Thr Gln Ser Gln Lys Phe Met Ser Thr Ser Val Gly

1 5 10 15

Asp Arg Val Ser Val Thr Cys Lys Ala Ser Gln Asn Val Gly Ile Asn

20 25 30

Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Ala Leu Ile

35 40 45

Tyr Ser Ala Ser Tyr Arg Tyr Ser Gly Val Pro Asp Arg Phe Thr Gly

50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Asn Val Gln Ser

65 70 75 80

Glu Asp Leu Ala Glu Tyr Phe Cys Gln Gln Tyr Asn Ser Tyr Pro Leu

85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg

100 105

<210> 5

6 / 6 4

<211> 117

<212> PRT

<213> Homo sapiens

<400> 5

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Arg Pro Gly Val

1 5 10 15

Ser Val Lys Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe Thr Asp Tyr

20 25 30

Ala Ile His Trp Val Arg Gln Ser His Ala Gln Ser Leu Glu Trp Ile

35 40 45

Gly Val Ile Gly Thr Tyr Ser Gly Asn Arg Asn Tyr Asn Gln Lys Phe

50 55 60

Lys Gly Lys Ala Thr Met Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr

65 70 75 80

Met Glu Leu Ala Arg Leu Thr Ser Glu Asp Ser Ala Ile Tyr Tyr Cys

85 90 95

Ala Arg Ser Ala Gly Tyr Ser Leu Asp Phe Trp Gly Gln Gly Thr Ser

100 105 110

7 / 6 4

Val Thr Val Ser Ser

115

<210> 6

<211> 112

<212> PRT

<213> Homo sapiens

<400> 6

Asp Val Val Met Thr Gln Thr Pro Leu Thr Leu Ser Val Thr Ile Gly

1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser

20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro Gly Gln Ser

35 40 45

Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro

50 55 60

Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile

65 70 75 80

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp Gln Gly

85 90 95

8 / 6 4

Lys His Phe Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys

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105

110

<210> 7

<211> 119

<212> PRT

<213> Homo sapiens

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Gln Val Gln Leu Gln Gln Ser Gly Gly Glu Leu Val Arg Pro Gly Thr

1

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15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ala Phe Thr Asn Tyr

20

25

30

Leu Ile Glu Trp Ile Arg Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile

35

40

45

Gly Val Ile Asn Pro Gly Ser Gly Asn Ser Lys Ser Ser Lys Asn Leu

50

55

60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Asn Thr Ala Tyr

65

70

75

80

Met Gln Leu Ser Ser Leu Thr Ser Asp Asp Ser Ala Val Tyr Phe Cys

9 / 6 4

85

90

95

Ala Arg Ser Gly Val Tyr Gly Ser Ser Pro Asp Tyr Trp Gly Gln Gly

100

105

110

Thr Thr Leu Thr Val Ser Ser

115

<210> 8

<211> 113

<212> PRT

<213> Homo sapiens

<400> 8

Asp Val Val Met Thr Gln Thr Pro Leu Thr Leu Ser Val Thr Ile Gly

1

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10

15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser

20

25

30

Asp Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro Gly Gln Ser

35

40

45

Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro

50

55

60

1 0 / 6.4

Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile

65

70

75

80

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp Gln Gly

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90

95

Thr His Phe Pro Gln Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys

100

105

110

Arg

<210> 9

<211> 118

<212> PRT

<213> Homo sapiens

<400> 9

Gln Val Gln Leu Gln Gln Ser Gly Gly Glu Leu Val Arg Pro Gly Thr

1

5

10

15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ala Phe Thr Asn Tyr

20

25

30

Leu Ile Glu Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Asp Trp Ile

35

40

45

1 1 / 6 4

Gly Met Ile Asn Pro Gly Ser Gly Gly Thr Lys Cys Asn Lys Lys Phe
50 55 60

Lys Gly Lys Val Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met His Leu Ser Ser Leu Thr Ser Asp Asp Ser Ala Val Tyr Phe Cys
85 90 95

Ala Arg Ser Gly Trp Val Ser Ala Met Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Ser Val Thr Val Ser Ser
115

<210> 10

<211> 113

<212> PRT

<213> Homo sapiens

<400> 10

Asp Ile Val Met Thr Gln Thr Pro Leu Thr Leu Ser Val Thr Ile Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser

1 2 / 6 4

20

25

30

Asp Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro Gly Gln Ser

35

40

45

Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro

50

55

60

Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile

65

70

75

80

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp Gln Gly

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95

Thr His Phe Pro Gln Thr Phe Gly Gly Gly Thr Lys Leu Glu Leu Lys

100

105

110

Arg

<210> 11

<211> 118

<212> PRT

<213> Homo sapiens

<400> 11

1 3 / 6 4

Gln Val Gln Leu Gln Gln Ser Gly Val Glu Leu Val Arg Pro Gly Thr

1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ala Phe Thr Asn Tyr

20 25 30

Leu Ile Glu Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Asp Trp Ile

35 40 45

Gly Met Ile Asn Pro Gly Ser Gly Gly Thr Lys Cys Asn Lys Lys Phe

50 55 60

Lys Gly Lys Val Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr

65 70 75 80

Met His Leu Ser Ser Leu Thr Ser Asp Asp Ser Ala Val Tyr Phe Cys

85 90 95

Ala Arg Ser Gly Trp Val Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr

100 105 110

Ser Val Thr Val Ser Ser

115

<210> 12

<211> 113

1 4 / 6 4

<212> PRT

<213> Homo sapiens

<400> 12

Asp Val Leu Met Thr Gln Thr Pro Leu Thr Leu Ser Val Thr Ile Gly

1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser

20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro Gly Gln Ser

35 40 45

Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro

50 55 60

Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile

65 70 75 80

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp Gln Gly

85 90 95

Thr His Phe Pro Gln Thr Phe Gly Gly Gly Thr Lys Leu Glu Leu Lys

100 105 110

Arg

1 5 / 6 4

<210> 13

<211> 117

<212> PRT

<213> Homo sapiens

<400> 13

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Arg Pro Gly Val

1 5 10 15

Ser Val Lys Ile Ser Cys Lys Gly Ser Gly Tyr Arg Phe Thr Asp Tyr

20 25 30

Ala Ile His Trp Val Lys Gln Ser His Ala Lys Ser Leu Glu Trp Ile

35 40 45

Gly Val Ile Ser Thr Tyr Tyr Gly Asn Thr Arg Tyr Asn Gln Lys Phe

50 55 60

Lys Gly Lys Ala Thr Met Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr

65 70 75 80

Met Glu Leu Ala Ser Leu Thr Ser Glu Asp Ser Val Ile Tyr Tyr Cys

85 90 95

1 6 / 6 4

Ala Arg Ser Gly Gly Ser Leu Met Asp Tyr Trp Gly Gln Gly Thr Ser

100

105

110

Val Thr Val Ser Ser

115

<210> 14

<211> 113

<212> PRT

<213> Homo sapiens

<400> 14

Asp Ile Val Met Thr Gln Thr Pro Leu Thr Leu Ser Val Thr Ile Gly

1

5

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Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser

20

25

30

Asp Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro Gly Gln Ser

35

40

45

Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro

50

55

60

Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile

65

70

75

80

1 7 / 6 4

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp Gln Gly

85

90

95

Thr His Phe Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys

100

105

110

Arg

<210> 15

<211> 117

<212> PRT

<213> Homo sapiens

<400> 15

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Arg Pro Gly Val

1

5

10

15

Ser Val Lys Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe Thr Asp Tyr

20

25

30

Ala Met His Trp Val Lys Gln Ser His Ala Lys Ser Leu Glu Trp Ile

35

40

45

Gly Val Ile Ser Thr Tyr Tyr Ser Asn Thr Arg Tyr Asn Gln Lys Phe

18/64

50

55

60

Lys Gly Lys Ala Thr Met Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr

65

70

75

80

Met Glu Leu Ala Arg Leu Thr Ser Glu Asp Ser Ala Ile Tyr Tyr Cys

85

90

95

Val Arg Ser Gly Gly Ser Asn Met Asp Tyr Trp Gly Gln Gly Thr Ser

100

105

110

Val Thr Val Ser Ser

115

<210> 16

<211> 113

<212> PRT

<213> Homo sapiens

<400> 16

Asp Ile Gln Met Thr Gln Thr Pro Leu Thr Leu Ser Val Thr Ile Gly

1

5

10

15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser

20

25

30

19/64

Asp Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro Gly Gln Ser

35

40

45

Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro

50

55

60

Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile

65

70

75

80

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp Gln Gly

85

90

95

Thr His Phe Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys

100

105

110

Arg

<210> 17

<211> 117

<212> PRT

<213> Homo sapiens

<400> 17

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Arg Pro Gly Val

1

5

10

15

20 / 64

Ser Val Lys Ile Ser Cys Lys Gly Ser Ser Tyr Lys Phe Thr Asp Tyr

20

25

30

Ala Met His Trp Val Lys Gln Ser His Ala Lys Ser Leu Glu Trp Ile

35

40

45

Gly Val Ile Ser Thr Tyr Tyr Gly Asn Val Lys Tyr Asn Gln Lys Phe

50

55

60

Lys Gly Lys Ala Thr Met Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr

65

70

75

80

Met Glu Leu Ala Arg Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys

85

90

95

Ala Arg Ser Ser Gly Ser Tyr Leu Asp Tyr Trp Gly Gln Gly Thr Ser

100

105

110

Val Thr Val Ser Ser

115

<210> 18

<211> 113

<212> PRT

<213> Homo sapiens

21 / 64

<400> 18

Asp Ile Val Met Thr Gln Thr Pro Leu Thr Leu Ser Val Thr Ile Gly

1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser

20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro Gly Gln Ser

35 40 45

Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro

50 55 60

Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile

65 70 75 80

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp Gln Gly

85 90 95

Thr His Phe Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys

100 105 110

Arg

2 2 / 6 4

<210> 19

<211> 119

<212> PRT

<213> Homo sapiens

<400> 19

Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly Thr

1

5

10

15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ala Phe Thr Asn Tyr

20

25

30

Leu Ile Glu Trp Val Lys Gln Arg Pro Gly Gln Gly Pro Glu Trp Ile

35

40

45

Gly Val Ile Asn Pro Gly Ser Gly Asn Ile Arg Tyr Asn Gly Lys Phe

50

55

60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr

65

70

75

80

Met Gln Leu Ser Ser Leu Thr Ser Asp Asp Ser Ala Val Tyr Phe Cys

85

90

95

Ala Arg Asp Ala Tyr Tyr Val Gly Ala Met Asp Tyr Trp Gly Gln Gly

100

105

110

2 3 / 6 4

Thr Ser Val Thr Val Ser Ser

115

<210> 20

<211> 113

<212> PRT

<213> Homo sapiens

<400> 20

Asp Val Val Met Thr Gln Thr Pro Leu Thr Leu Ser Val Thr Ile Gly

1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser

20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro Gly Gln Ser

35 40 45

Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro

50 55 60

Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile

65 70 75 80

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp Gln Gly

2 4 / 6 4

85

90

95

Thr His Phe Pro Gln Thr Phe Gly Gly Gly Thr Lys Leu Glu Leu Lys

100

105

110

Arg

<210> 21

<211> 119

<212> PRT

<213> Homo sapiens

<400> 21

Gln Val Gln Leu Gln Gln Ser Glu Ala Glu Leu Val Arg Pro Glu Thr

1

5

10

15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ser Phe Arg Asn Tyr

20

25

30

Leu Ile Glu Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile

35

40

45

Gly Val Ile Asn Pro Gly Ser Gly Asn Thr Lys Tyr Asn Glu Lys Phe

50

55

60

25 / 64

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Asp Asp Ser Ala Val Tyr Phe Cys
85 90 95

Ala Arg Asp Gly Tyr Tyr Leu Gly Thr Met Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Ser Val Thr Val Ser Ser
115

<210> 22

<211> 113

<212> PRT

<213> Homo sapiens

<400> 22

Asp Ile Val Leu Thr Gln Thr Pro Leu Thr Leu Ser Val Thr Ile Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser
20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro Gly Gln Ser
35 40 45

26 / 64

Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro

50

55

60

Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile

65

70

75

80

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp Gln Gly

85

90

95

Thr His Phe Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys

100

105

110

Arg

<210> 23

<211> 119

<212> PRT

<213> Homo sapiens

<400> 23

Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly Thr

1

5

10

15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ile Asn Asn

2 7 / 6 4

20

25

30

Leu Ile Glu Trp Val Gln Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile

35

40

45

Gly Val Ile Asn Pro Gly Ser Gly Asn Val Lys Tyr Asn Glu Lys Phe

50

55

60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr

65

70

75

80

Met Gln Leu Ser Ser Leu Thr Ser Asp Asp Ser Ala Val Tyr Phe Cys

85

90

95

Ala Arg Asp Gly Tyr Tyr Leu Gly Thr Met Asp His Trp Gly Gln Gly

100

105

110

Thr Ser Val Thr Val Ser Ser

115

<210> 24

<211> 113

<212> PRT

<213> Homo sapiens

<400> 24

28 / 64

Asp Val Val Met Thr Gln Thr Pro Leu Thr Leu Ser Val Thr Ile Gly

1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser

20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro Gly Gln Ser

35 40 45

Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro

50 55 60

Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile

65 70 75 80

Ser Arg Val Glu Ala Glu Asp Leu Gly Ile Tyr Tyr Cys Trp Gln Gly

85 90 95

Thr His Phe Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Leu Lys

100 105 110

Arg

<210> 25

<211> 117

29 / 64

<212> PRT

<213> Homo sapiens

<400> 25

Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Arg Pro Gly Val

1 5 10 15

Ser Val Lys Ile Ser Cys Lys Gly Ser Ser Tyr Lys Phe Thr Asp Tyr

20 25 30

Ala Met His Trp Val Lys Gln Ser His Ala Lys Ser Leu Glu Trp Ile

35 40 45

Gly Val Ile Ser Thr Tyr Tyr Gly Asn Val Lys Tyr Asn Gln Lys Phe

50 55 60

Lys Gly Lys Ala Thr Met Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr

65 70 75 80

Met Glu Leu Ala Arg Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys

85 90 95

Ala Arg Ser Tyr Gly Ser Tyr Leu Asp Tyr Trp Gly Gln Gly Thr Ser

100 105 110

Val Thr Val Ser Ser

30/64

115

<210> 26

<211> 112

<212> PRT

<213> Homo sapiens

<400> 26

Asp Ile Val Met Thr Gln Thr Pro Leu Thr Leu Ser Val Thr Ile Gly

1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu Asp Ser

20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro Gly Gln Ser

35 40 45

Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro

50 55 60

Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile

65 70 75 80

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp Gln Gly

85 90 95

3 1 / 6 4

Thr His Phe Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys

100

105

110

<210> 27

<211> 22

<212> DNA

<213> Artificial

<220>

<223> an artificially synthesized primer sequence

<400> 27

cagctatgaa atacctattg cc

22

<210> 28

<211> 23

<212> DNA

<213> Artificial

<220>

<223> an artificially synthesized primer sequence

<400> 28

cttttcataa tcaaaatcac cgg

23

<210> 29

3 2 / 6 4

<211> 19

<212> DNA

<213> Artificial

<220>

<223> an artificially synthesized primer sequence

<400> 29

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19

<210> 30

<211> 20

<212> DNA

<213> Artificial

<220>

<223> an artificially synthesized primer sequence

<400> 30

aaatcaccgg aaccagagcc

20

<210> 31

<211> 24

<212> DNA

<213> Artificial

<220>

<223> an artificially synthesized primer sequence

<400> 31

ttactcgcgg cccagccggc catg

24

<210> 32

<211> 28

<212> DNA

<213> Artificial

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<223> an artificially synthesized primer sequence

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28

<210> 33

<211> 1215

<212> DNA

<213> Homo sapiens

<400> 33

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120

cactggacgc tgaacctcgc ggacagttaa gaaccaggg gcctctgcgc cctgggccc 180

gctctgtccc acaccgcggt cacatggcac cacctctctt gcagcttcca ccaagggcc 240

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tgccaagaca aagccgcggg aggagcagtt caacagcacg tacgtgtgg tcagcgtcct 780

caccgtcctg caccaggact ggctgaacgg caaggagtac aagtgaagg tctccaacaa 840

aggcctcccg tcctccatcg agaaaacat ctccaaagcc aaagggcagc cccgagagcc 900

acaggtgtgc accctgcccc catcccagga ggagatgacc aagaaccagg tcagcctgtg 960

gtgcctggtc aaaggcttct accccagcga catcgccgtg gagggggaga gcaatgggca 1020

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ctacagcagg ctaaccgtgg acaagagcag gtggcaggag gggaatgtct tctcatgctc 1140

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<210> 34

<211> 684

<212> DNA

<213> Homo sapiens

<400> 34

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agagctccaa caaaacaatt tagaacttta ttaaggaata gggggaagct aggaagaaac 180

tcaaaacatc aagattttta atacgcttct tgggtctcctt gctataatta tctgggataa 240

gcatgctgtt ttctgtctgt ccctaacatg ccctgtgatt atccgcaaac aacacaccca 300
 agggcagaac tttgttactt aaacaccatc ctgtttgctt ctttcctcag gaactgtggc 360
 tgcaccatct gtcttcatct tcccgccatc tgatgagcag ttgaaatctg gaactgcctc 420
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<212> DNA

<213> Homo sapiens

<400> 35

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| tgccctgac ctaagccac cccaaaggcc aaactctcca ctccctcagc tcggacacct | 180 |
| tctctctcc cagattccag taactcccaa tcttctctct gcagcttcca ccaagggccc | 240 |
| atccgtcttc cccctggcgc cctgctccag gagcacctcc gagagcacag ccgccctggg | 300 |
| ctgcctggtc aaggactact tccccgaacc ggtgacggtg tcgtggaact caggcgcct | 360 |
| gaccagcggc gtgcacacct tcccggctgt cctacagtcc tcaggactct actccctcag | 420 |
| cagcgtgggtg accgtgccct ccagcagctt gggcacgaag acctacacct gcaacgtaga | 480 |
| tcacaagccc agcaacacca aggtggacaa gagagttgag tccaaatatg gtcccccatg | 540 |
| cccaccatgc ccagcacctg agttcctggg gggaccatca gtcttcctgt tcccccaaa | 600 |
| accaaggac actctcatga tctcccgac ccctgaggtc acgtgcgtgg tgggtggacgt | 660 |
| gagccaggaa gaccccgagg tccagttcaa ctggtacgtg gatggcgtgg aggtgcataa | 720 |
| tgccaagaca aagccgcggg aggagcagtt caacagcacg taccgtgtgg tcagcgtcct | 780 |
| caccgtcctg caccaggact ggctgaacgg caaggagtac aagtgaagg tctccaacaa | 840 |
| aggcctcccc tcctccatcg agaaaacat ctccaaagcc aaagggcagc cccgagagcc | 900 |

acaggtgtac accctgcccc catcccagtg cgagatgacc aagaaccagg tcagcctgtc 960

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<210> 36

<211> 21

<212> DNA

<213> Artificial

<220>

<223> an artificially synthesized primer sequence

<400> 36

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21

<210> 37

<211> 18

<212> DNA

<213> Artificial

<220>

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<400> 37

tagaaggcac agtcgagg

18

<210> 38

<211> 24

<212> DNA

<213> Artificial

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<400> 38

ctctgaatac tttcaacaag ttac

24

<210> 39

<211> 116

<212> PRT

<213> Mus musculus

<400> 39

40 / 64

Met Glu Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Thr

1 5 10 15

Gln Ser Leu Ser Leu Thr Cys Ser Val Thr Gly Tyr Ser Ile Thr Ser

20 25 30

Gly Tyr Tyr Trp Thr Trp Ile Arg Gln Phe Pro Gly Asn Asn Leu Glu

35 40 45

Trp Ile Gly Tyr Ile Ser Phe Asp Gly Thr Asn Asp Tyr Asn Pro Ser

50 55 60

Leu Lys Asn Arg Ile Ser Ile Thr Arg Asp Thr Ser Glu Asn Gln Phe

65 70 75 80

Phe Leu Lys Leu Asn Ser Val Thr Thr Glu Asp Thr Ala Thr Tyr Tyr

85 90 95

Cys Ala Arg Gly Pro Pro Cys Thr Tyr Trp Gly Gln Gly Thr Leu Val

100 105 110

Thr Val Ser Ala

115

<210> 40

<211> 6

4 1 / 6 4

<212> PRT

<213> Mus musculus

<400> 40

Ser Gly Tyr Tyr Trp Thr

1 5

<210> 41

<211> 16

<212> PRT

<213> Mus musculus

<400> 41

Tyr Ile Ser Phe Asp Gly Thr Asn Asp Tyr Asn Pro Ser Leu Lys Asn

1 5 10 15

<210> 42

<211> 6

<212> PRT

<213> Mus musculus

<400> 42

Gly Pro Pro Cys Thr Tyr

1 5

<210> 43

4 2 / 6 4

<211> 120

<212> PRT

<213> Mus musculus

<400> 43

Met Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly

1 5 10 15

Ala Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp

20 25 30

Asp Tyr Val His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp

35 40 45

Ile Gly Arg Ile Asp Pro Ala Asp Gly Lys Thr Lys Tyr Ala Pro Lys

50 55 60

Phe Gln Asp Lys Ala Thr Met Thr Ser Asp Thr Ser Ser Asn Thr Ala

65 70 75 80

Tyr Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr

85 90 95

Cys Val Arg Trp Arg Ile Tyr Tyr Gly Leu Met Asp Tyr Trp Gly Gln

100 105 110

4 3 / 6 4

Gly Thr Ser Val Thr Val Ser Ser

115

120

<210> 44

<211> 5

<212> PRT

<213> Mus musculus

<400> 44

Asp Asp Tyr Val His

1

5

<210> 45

<211> 17

<212> PRT

<213> Mus musculus

<400> 45

Arg Ile Asp Pro Ala Asp Gly Lys Thr Lys Tyr Ala Pro Lys Phe Gln

1

5

10

15

Asp

<210> 46

<211> 10

4 4 / 6 4

<212> PRT

<213> Homo sapiens

<400> 46

Trp Arg Ile Tyr Tyr Gly Leu Met Asp Tyr

1 5 10

<210> 47

<211> 123

<212> PRT

<213> Mus musculus

<400> 47

Met Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly

1 5 10 15

Ala Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr His

20 25 30

Phe Val Leu His Trp Val Lys Gln Asn Pro Gly Gln Gly Leu Glu Trp

35 40 45

Ile Gly Tyr Ile Ile Pro Tyr Asn Asp Gly Thr Lys Tyr Asn Glu Lys

50 55 60

Phe Lys Gly Lys Ala Thr Leu Thr Ser Asp Lys Ser Ser Ser Thr Ala

4 5 / 6 4

65

70

75

80

Tyr Met Glu Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr

85

90

95

Cys Ala Arg Gly Asn Arg Tyr Asp Val Gly Ser Tyr Ala Met Asp Tyr

100

105

110

Trp Gly Gln Gly Thr Ser Val Thr Val Ser Ser

115

120

<210> 48

<211> 5

<212> PRT

<213> Mus musculus

<400> 48

His Phe Val Leu His

1

5

<210> 49

<211> 17

<212> PRT

<213> Mus musculus

<400> 49

46 / 64

Tyr Ile Ile Pro Tyr Asn Asp Gly Thr Lys Tyr Asn Glu Lys Phe Lys

1 5 10 15

Gly

<210> 50

<211> 13

<212> PRT

<213> Mus musculus

<400> 50

Gly Asn Arg Tyr Asp Val Gly Ser Tyr Ala Met Asp Tyr

1 5 10

<210> 51

<211> 117

<212> PRT

<213> Mus musculus

<400> 51

Met Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly

1 5 10 15

Ala Ser Val Lys Leu Ser Cys Thr Val Ser Gly Phe Asn Ile Gln Asp

20

25

30

4 7 / 6 4

Asn Tyr Met His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp
35 40 45

Ile Gly Arg Ile Asp Pro Ala Asn Gly Asn Thr Arg Tyr Asp Pro Lys
50 55 60

Phe Gln Gly Lys Ala Thr Ile Thr Ala Asp Ile Ser Ser Asn Thr Thr
65 70 75 80

Cys Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Ala Ser Pro Tyr Tyr Pro Leu Gly Cys Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Val Ser Ala
115

<210> 52

<211> 5

<212> PRT

<213> Mus musculus

<400> 52

Asp Asn Tyr Met His

4 8 / 6 4

1 5

<210> 53

<211> 17

<212> PRT

<213> Mus musculus

<400> 53

Arg Ile Asp Pro Ala Asn Gly Asn Thr Arg Tyr Asp Pro Lys Phe Gln

1 5 10 15

Gly

<210> 54

<211> 7

<212> PRT

<213> Mus musculus

<400> 54

Pro Tyr Tyr Pro Leu Gly Cys

1 5

<210> 55

<211> 116

<212> PRT

49 / 64

<213> Mus musculus

<400> 55

Met Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly

1 5 10 15

Ala Ser Val Lys Ile Ser Cys Lys Thr Ser Gly Tyr Thr Phe Thr Glu

20 25 30

Asn Thr Ile Tyr Trp Val Lys Gln Ser His Gly Lys Ser Leu Glu Trp

35 40 45

Ile Gly Ser Ile Thr Thr Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr

50 55 60

Leu Thr Ile Asp Lys Ser Ser Ser Ser Ala Tyr Met Glu Leu Arg Ser

65 70 75 80

Leu Thr Ser Glu Glu Ser Ala Val Tyr Tyr Cys Ala Arg Ser Gly Gly

85 90 95

Arg Gly Lys Pro Tyr Tyr Phe Asp Ser Trp Gly Gln Gly Thr Thr Leu

100 105 110

Thr Val Ser Ser

115

50 / 64

<210> 56

<211> 5

<212> PRT

<213> Mus musculus

<400> 56

Glu Asn Thr Ile Tyr

1

5

<210> 57

<211> 11

<212> PRT

<213> Mus musculus

<400> 57

Ser Ile Thr Thr Tyr Asn Gln Lys Phe Lys Asp

1

5

10

<210> 58

<211> 12

<212> PRT

<213> Mus musculus

<400> 58

Ser Gly Gly Arg Gly Lys Pro Tyr Tyr Phe Asp Ser

5 1 / 6 4

1 5 10

<210> 59

<211> 117

<212> PRT

<213> Mus musculus

<400> 59

Met Gln Val Gln Leu Gln Gln Ser Gly Ser Glu Leu Val Lys Pro Gly

1 5 10 15

Ala Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp

20 25 30

Asn Tyr Met His Trp Ile Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp

35 40 45

Ile Gly Arg Ile Asp Pro Gly Asn Gly Asn Ser Arg Tyr Asp Pro Lys

50 55 60

Phe Gln Gly Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala

65 70 75 80

Tyr Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr

85 90 95

5 2 / 6 4

Cys Ala Ser Pro Tyr Tyr Pro Leu Gly Tyr Trp Gly Gln Gly Thr Leu

100

105

110

Val Thr Val Ser Ala

115

<210> 60

<211> 5

<212> PRT

<213> Mus musculus

<400> 60

Asp Asn Tyr Met His

1

5

<210> 61

<211> 17

<212> PRT

<213> Mus musculus

<400> 61

Arg Ile Asp Pro Gly Asn Gly Asn Ser Arg Tyr Asp Pro Lys Phe Gln

1

5

10

15

Gly

5 3 / 6 4

<210> 62

<211> 7

<212> PRT

<213> Mus musculus

<400> 62

Pro Tyr Tyr Pro Leu Gly Tyr

1 5

<210> 63

<211> 114

<212> PRT

<213> Mus musculus

<400> 63

Met Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly

1 5 10 15

Ala Ser Val Lys Leu Ser Cys Thr Val Ser Gly Phe Asn Ile Lys Asp

20 25 30

Asp Tyr Ile His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp

35 40 45

Ile Gly Arg Ile Asp Pro Thr Asn Gly Asn Pro Ala Tyr Ala Pro Lys

5 4 / 6 4

50

55

60

Phe Gln Asp Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Ile Thr Ala

65

70

75

80

Tyr Leu Gln Leu Asn Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr

85

90

95

Cys Thr Gly Ser Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val

100

105

110

Ser Ala

<210> 64

<211> 5

<212> PRT

<213> Mus musculus

<400> 64

Asp Asp Tyr Ile His

1

5

<210> 65

<211> 17

<212> PRT

5 5 / 6 4

<213> Mus musculus

<400> 65

Arg Ile Asp Pro Thr Asn Gly Asn Pro Ala Tyr Ala Pro Lys Phe Gln

1 5 10 15

Asp

<210> 66

<211> 4

<212> PRT

<213> Mus musculus

<400> 66

Ser Phe Ala Tyr

1

<210> 67

<211> 114

<212> PRT

<213> Mus musculus

<400> 67

Met Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly

1 5 10 15

5 6 / 6 4

Ala Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp
20 25 30

Asp Tyr Val His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp
35 40 45

Ile Gly Arg Ile His Pro Ala Asn Gly Asn Pro Gln Tyr Ala Pro Lys
50 55 60

Phe Gln Asp Lys Ala Thr Ile Ile Ile Gly Thr Ala Ser Asn Thr Thr
65 70 75 80

Tyr Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Ala Gly Pro Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val
100 105 110

Ser Ala

<210> 68

<211> 5

<212> PRT

<213> Mus musculus

5 7 / 6 4

<400> 68

Asp Asp Tyr Val His

1 5

<210> 69

<211> 17

<212> PRT

<213> Mus musculus

<400> 69

Arg Ile His Pro Ala Asn Gly Asn Pro Gln Tyr Ala Pro Lys Phe Gln

1 5 10 15

Asp

<210> 70

<211> 4

<212> PRT

<213> Mus musculus

<400> 70

Pro Phe Ala Tyr

1

58/64

<210> 71

<211> 116

<212> PRT

<213> Mus musculus

<400> 71

Met Glu Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser

1

5

10

15

Gln Ser Leu Ser Leu Thr Cys Ser Val Thr Gly Tyr Ser Ile Thr Ser

20

25

30

Asn Tyr Tyr Trp Asn Trp Ile Arg Gln Phe Pro Gly Asn Lys Leu Glu

35

40

45

Trp Met Gly Tyr Ile Asn Tyr Asp Gly Ser Asn Asn Tyr Asn Pro Ser

50

55

60

Leu Lys Asn Arg Ile Ser Ile Ser Arg Asp Thr Ser Lys Asn Gln Phe

65

70

75

80

Phe Leu Lys Leu Asn Ser Val Thr Thr Glu Asp Thr Ala Thr Tyr Tyr

85

90

95

Cys Ala Arg Gly Gly Ala Phe Thr Tyr Trp Gly Gln Gly Thr Leu Val

100

105

110

59 / 64

Thr Val Ser Ala

115

<210> 72

<211> 6

<212> PRT

<213> Mus musculus

<400> 72

Ser Asn Tyr Tyr Trp Asn

1

5

<210> 73

<211> 16

<212> PRT

<213> Mus musculus

<400> 73

Tyr Ile Asn Tyr Asp Gly Ser Asn Asn Tyr Asn Pro Ser Leu Lys Asn

1

5

10

15

<210> 74

<211> 6

<212> PRT

<213> Mus musculus

60/64

<400> 74

Gly Gly Ala Phe Thr Tyr

1

5

<210> 75

<211> 114

<212> PRT

<213> Mus musculus

<400> 75

Met Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly

1

5

10

15

Ala Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Ile Thr Asp

20

25

30

Asn Lys Met Asp Trp Val Lys Gln Ser His Gly Lys Ser Leu Glu Trp

35

40

45

Ile Gly Tyr Ile Ser Pro Asn Asn Gly Asp Ile Gly Tyr Asn Arg Lys

50

55

60

Phe Arg Asn Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala

65

70

75

80

6 1 / 6 4

Tyr Met Glu Leu His Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr

85

90

95

Cys Ala Arg His Arg Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val

100

105

110

Ser Ala

<210> 76

<211> 5

<212> PRT

<213> Mus musculus

<400> 76

Asp Asn Lys Met Asp

1

5

<210> 77

<211> 17

<212> PRT

<213> Mus musculus

<400> 77

Tyr Ile Ser Pro Asn Asn Gly Asp Ile Gly Tyr Asn Arg Lys Phe Arg

1

5

10

15

6 2 / 6 4

Asn

<210> 78

<211> 4

<212> PRT

<213> Mus musculus

<400> 78

His Arg Ala Tyr

1

<210> 79

<211> 121

<212> PRT

<213> Mus musculus

<400> 79

Met Asp Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly

1

5

10

15

Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Thr

20

25

30

Tyr Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp

6 3 / 6 4

35

40

45

Val Ala Tyr Ile Ser Asn Gly Gly Ala Asn Thr Tyr Tyr Pro Asp Ser

50

55

60

Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu

65

70

75

80

Tyr Leu Gln Met Ser Ser Leu Arg Ser Glu Asp Thr Ala Leu Tyr Tyr

85

90

95

Cys Ala Arg Gly Gly Tyr Arg Tyr Pro Tyr Ala Met Asp Tyr Trp Gly

100

105

110

Gln Gly Thr Ser Val Thr Val Ser Ser

115

120

<210> 80

<211> 5

<212> PRT

<213> Mus musculus

<400> 80

Thr Tyr Ala Met Ser

1

5

6 4 / 6 4

<210> 81

<211> 17

<212> PRT

<213> Mus musculus

<400> 81

Tyr Ile Ser Asn Gly Gly Ala Asn Thr Tyr Tyr Pro Asp Ser Val Lys

1

5

10

15

Gly

<210> 82

<211> 11

<212> PRT

<213> Mus musculus

<400> 82

Gly Gly Tyr Arg Tyr Pro Tyr Ala Met Asp Tyr

1

5

10